



The ‘parent’s kiss’: an effective way to remove paediatric nasal foreign bodies

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ABSTRACT

INTRODUCTION The objectives of this study were to: (i) evaluate the effectiveness of ‘parent’s kiss’ as a technique for removal of nasal foreign bodies in children; and (ii) determine whether this technique reduces the number of children requiring general anaesthesia for their removal.

PATIENTS AND METHODS This was a prospective observational study in the accident and emergency and ENT departments at Luton and Dunstable Hospital. The participants were 31 children with nasal foreign bodies, under the age of 5 years, presenting via the acute services over a 6-month period. The primary outcome measured was successful removal of nasal foreign body with the ‘parent’s kiss’ technique. Secondary outcome was reduction in the number of general anaesthetics following introduction of the technique.

RESULTS The technique was successful in 20 out of the 31 children (64.5%) in the study group. Only one patient required general anaesthesia for removal of nasal foreign body (3%). This compares with a rate of 32.5% requiring removal under general anaesthetic in the preceding 6-month period. The ‘parent’s kiss’, when not successful, seemed to improve the visibility of the foreign body making their subsequent removal easier.

CONCLUSIONS The ‘parent’s kiss’ is an effective technique. It is non-traumatic, both physically and emotionally, for the child subjected to it. We advocate that it should be used routinely as a first line of management in children with a nasal foreign body in the primary care setting.

KEYWORDS

Foreign – Body – Nose – Parent’s kiss

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Nasal foreign bodies are a commonly encountered problem in ENT acute practice. Personal experience and previous studies have shown that they occur predominantly in children between 2–5 years old.^{1,2} Children under the age of 5 years have difficulty in nose blowing. Treating this age group of children is challenging; first because of their natural fear of the unknown, and second as they are difficult to restrain. Their unwillingness to co-operate is often exacerbated by previous painful attempts to remove foreign bodies by either parents or other medical professionals. Various methods for foreign body removal have been described such as using a wax hook, old Eustachian tube catheter, Foley and Fogarty catheters, cupped forceps, haemostats, wire ear loops, and cyanoacrylate glue.^{1,5–6} Table 1 shows various techniques for removal of nasal foreign bodies and their possible complications. All these methods are invasive, can cause trauma to the nasal mucosa, and have the potential risk of

further displacing the foreign body with possible aspiration. Several positive pressure techniques have also been described (*e.g.* using bag-valve-mask apparatus, oxygen tubing attached to the unoccluded nostril), but none have been widely accepted for regular use.^{1,5–7} These

Table 1 Techniques for removal of nasal foreign bodies with complications

| Technique | Complications |
|-------------------|----------------------------------|
| Instrumentation | Trauma, displacement, aspiration |
| Balloon catheter | Trauma, displacement, aspiration |
| Suction | Trauma, displacement |
| Positive pressure | Barotrauma |
| Nasal wash | Aspiration, nasal saline reflux |

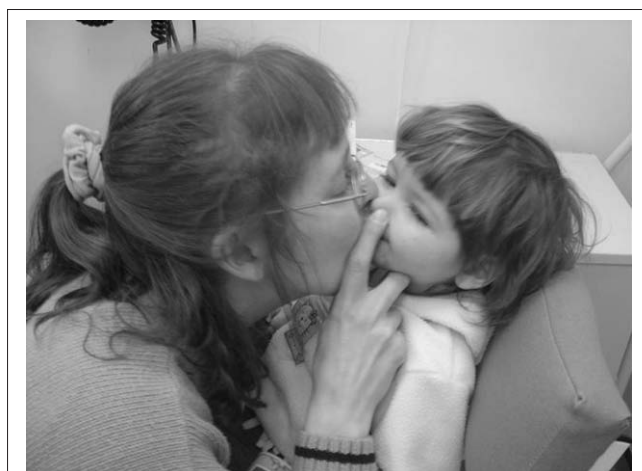


Figure 1 Mother performing 'parent's kiss'.

manoeuvres aim to build up positive pressure behind the foreign body, which would then force it out of the nostril. The 'parent's kiss' is a unique method which works on the same principle, but does not require the child to be restrained, and can be performed by the parent without any physical contact from the attending doctor. The technique was first described by Ctibor in 1965 and involves the parent exhaling whilst kissing their child and occluding the unaffected nostril (Fig. 1). During this procedure, the glottis is closed, so there is little risk of barotrauma as with other positive pressure techniques. Moreover, the pressure used is low; it would be comparable to that generated during sneezing, which is about 60 mmHg. The aim of this study was to evaluate the effectiveness of the 'parent's kiss' for removal of nasal foreign bodies in children and to determine if this technique reduces the number of children requiring general anaesthesia.

Patients and Methods

Study setting and subjects

We conducted a prospective observational study over a 6-month period from October 2004 to March 2005. All children with nasal foreign bodies under the age of 5 years presenting to the accident and emergency and ENT department at Luton and Dunstable hospital, were included in the study. They had to be accompanied by a parent and the foreign body had to have been present for less than 10 days. Patients over the age of 5 years were excluded as it was felt they would be able to blow their nose or co-operate with removal of foreign body with instruments.

Parents gave verbal consent for participation in this trial. The procedure was then clearly explained to the parent. The child was made comfortable, and was told that they were going to 'get a big kiss'. The parent was asked to make

a firm seal around the child's partially open mouth, and to deliver a short, sharp, puff of air, while occluding the unobstructed nostril with the thumb. This was repeated up to a maximum of five times.

Data collection

Upon completion of the procedure, a proforma was filled out by the supervising doctor. The data recorded on the proforma included age, sex, visibility of foreign body, type of foreign body, duration since insertion, previous interventions, number of times the 'parent's kiss' had to be performed, whether successful or not and methods used if this failed. In the cases where the technique failed, it was noted if the foreign body was made more visible.

The number of children that underwent a general anaesthetic for nasal foreign body removal was obtained from the operative log in theatres. This was done for the 6 months during the study and for the previous 6 months when the 'parent's kiss' was not in use. The hospital patient information system (iPIMSi) was also used to identify children under 5 years of age, attending the accident and emergency or ENT department with nasal foreign bodies for a period of 6 months prior to the study.

Results

A total of 33 proforma data were completed. Two were excluded, as they did not receive the 'parent's kiss'. One was due to the child's non-compliance and the other because the parent had tried the method at home. Thirty-one children were included in the study (19 boys and 12 girls). The mean age was 33 months and the median 24 months. Four foreign bodies were not visible on anterior rhinoscopy prior to the 'parent's kiss'. Time since insertion ranged from 30 min to 7 days. Fourteen children had had prior attempts by parents or their primary care physicians to remove the foreign bodies.

The procedure was successful in 20 children (64.5%). We divided the type of foreign bodies into two groups: small, smooth spherical objects (*e.g.* peas and beads), and large,

Table 2 Better success at removing small regular nasal foreign bodies (FBs), as compared to large irregular ones using the 'parent's kiss'

| | Small/regular FBs | Large/irregular FBs |
|----------------------------|----------------------|------------------------|
| Removal with parent's kiss | 13 | 7 |
| Removal with other methods | 4 | 6 |

Table 3 The reduction of general anaesthetic use following introduction of the 'parent's kiss' technique

| | March 04 to Oct. 04 | Oct. 04 to March 05 |
|-------------------------------------|---------------------|---------------------|
| No. of patients | 40 | 31 |
| No. of general anaesthetics | 13 (32%) | 1 (3%) |
| Successful removal with instruments | 27 of 40 | 10 of 11 |

irregular shaped objects (*e.g.* paper and plastic). The details are illustrated in Table 2. We found that 'parent's kiss' was more successful in removing small, smooth spherical objects than the larger or irregular ones. Time since insertion, previous failed attempts, or the age of the child did not affect the results of the study. There were no complications. Two of the children who had removal of foreign body by instrument had minor epistaxis that quickly settled on its own.

Even when the procedure failed, it improved the outcome with subsequent instrumental removal. In the 6 months that the 'parent's kiss' method was in use, removal with instruments was successful in 10 patients (90.9%), as compared to 27 children (67.5%) in the control 6 months before use of the 'parent's kiss' method (Table 3). This was thought to be because of improved visibility due to anterior displacement of the foreign body. Among the four patients in whom the foreign body was not visible, two were successfully removed using the procedure; the other two became visible after the 'parent's kiss' and were removed with a hook.

During the study period, only one child needed general anaesthesia for removal of nasal foreign body. In the previous 6 months, 13 out of 40 patients with intranasal foreign body required general anaesthesia, demonstrating a significant reduction in the rate of general anaesthesia from 32.5% to 3%.

Discussion

Nasal foreign body removal can be difficult in small children, particularly when fear makes the patient uncooperative.⁶ Leaving a nasal foreign body has the potential risk of epistaxis, purulent rhinorrhoea and, rarely, aspiration into the tracheobronchial tree.^{1,11}

A significant proportion of the patients require removal of foreign body under general anaesthesia, necessitating patient transfer to a hospital with in-patient facilities, admission and potential overnight stay for observation. All the above, can be a traumatic experience for the family involved and incurs unnecessary expenditure, which could be avoidable. A single such procedure costs the National Health Service, on average, just over £1000. If used routinely, the 'parent's kiss' could prove to be cost-effective.

The 'parent's kiss' is a useful technique; it is simple, safe and does not require instruments. The procedure could be explained over the telephone to the primary care doctor, nurse, or parent without the need for hospital attendance.

Conclusions

This study demonstrates the effectiveness of 'parent's kiss' as a method for removal of nasal foreign bodies in small children.

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